

Work Order ID 81085***81085***

Page 1

March-08-12 8:43:41 AM

Item ID: D412-742-043

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Replacement Float Skidtube

Start Date: 08/03/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 22/03/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: MLJDate: 12/03/08 Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D3391

I

100

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

If D412-742-043 is a W/O on it's own,
Photocopy bluefile and create labels per PPP D412-742-043 CHG005

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Item Name: Replacement Float Skidtube

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Start Date: 08/03/2012 Start Qty: 1.00

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Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

110

0.00

110

HandFinishing

HandFinish

Memo

0.00

Hand Finishing

1-Install tubes together and seal them all the way around using Sikaflex
241/291. Ensure tube ends line-up with saddle holes for proper alignment. using
7/16" "T" Pins.
A/RSikaflex-241/-291 11119999
Expiry date: 12/08

2-Install wearplates as per Dwg D3391. Ensure that plastic washers are against
wearplate, then topped with the SS washer. Seal all bolts with sikaflex except
ones with inserts on inside of tube ,hand tighten only bolts with no sikaflex.

A/RSikaflex-241/-291 11119999
Expiry date: 12/08

3-Remove "T" pins once sikaflex is dry.

4-Coat all exposed hardware with LPS Procyon. Remove any excess off with
MEK degreaser.

A/RLPS Procyon 11114596

1 4 11 10813

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NOTE: Date & initial all entries

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Revision ID:

Item Name: Replacement Float Skidtube

Stop ***NS2***

Start Date: 08/03/2012 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 22/03/2012 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***
Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

120 QC5- Inspect part completeness to step on W/O

0.00

120

QC

Memo

0.00

Quality Control

130

0.00

130

Packaging

Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP D412-742-043

Location:

PPP Rev: PPP 78554

140

QC21- Final Inspection - Work Order Release

0.00

140

QC

Memo

0.00

Quality Control

12/3/15

12/3/16

ME 12-03-16

Dart Aerospace Ltd

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March-08-12 8:43:46 AM

Page 1

81085

D412-742-043

Required Date: 22/03/2012

Required Qty: 1.00

Comments:

IPP Rev A	05.10.13	New Issue	KJ/JLM	
IPP Rev	06.02.13	ECN 773 dwg @ rev.D	EC	
IPP Rev:C	07-05-28	As per Rev F	JLM	
IPP Rev:D	07-12-04	ECN 1072	DD verified by:JLM	
IPP Rev:E	08-09-08	ecn 08-510	DD verified by:EC	IPP Rev:F
11.11.01	as per DSI9517 REV.B	DD verified by:EC		

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3391-021		Manufactured	No			110	Each	0.0000	1	1			
D3391-021													
Fwd Tube Assembly													
D3391-023		Manufactured	No			110	Each	0.0000	1	1			
D3391-023													
Mid Tube Assembly													
				<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>				
				FP			1						
				GA			-1						
D3391-025		Manufactured	No			110	Each	0.0000	1	1			
D3391-025													
Aft Tube Assembly													

W/O:		WORK ORDER CHANGES					
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Picklist Print

March-08-12 8:43:46 AM

Page 2

Work Order ID: 81085

Parent Item: D412-742-043

Parent Item Name: Replacement Float Skidtube

81085

D412-742-043

Start Date: 08/03/2012

Required Date: 22/03/2012

Start Qty: 1.00

Required Qty: 1.00

AN3C4A

Purchased

No

110

Each

3,729.000

24

24

AN3C4A

BOLT

**

HL 12/03/12

Location

Loc Qty

Loc Code

ST350

3729

117688

5

118112

16

119749

10

120187

2000

120423

10

120521

510

120769

515

120799

163

120930

500

12/03/12

AN3C6A

Purchased

No

110

Each

672.0000

10

10

AN3C6A

BOLT

**

HL 12/03/12

Location

Loc Qty

Loc Code

FP001

1

111982

1

ST351

671

111982

2

116419

23

116549

2

116704

12

117619

10

117688

1

117872

5

118422

13

119449

21

120423

182

120693

400

12/03/12

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Page 3

Work Order ID: 81085

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Parent Item: D412-742-043

D412-742-043

Parent Item Name: Replacement Float Skidtube

Start Date: 08/03/2012

Required Date: 22/03/2012

Start Qty: 1.00

Required Qty: 1.00

AN3C7A Purchased No 110 Each 169.0000 4 4

AN3C7A

BOLT

**

ju 12/03/12

Location

Loc Qty

Loc Code

ST351

169

113149

14

116169

1

117313

10

117619

12

117688

6

119749

6

120731

120

x4

AN960C10L

NAS1149C0332

Purchased

No

110

Each

0.0000

38

38

*AN960C10I * X

washer

D4095-041

Manufactured

No

110

Each

7.0000

1

1

D4095-041

Wearplate Assembly

**

M120648 (v38) ju 12/03/12

**

ju 12/03/12

Location

Loc Qty

Loc Code

FP001

7

78938

7

D4095-043

Manufactured

No

110

Each

8.0000

1

1

D4095-043

Wearplate Assembly

**

ju 12/03/12

Location

Loc Qty

Loc Code

FP001

8

78939

8

x1

W/O:		WORK ORDER CHANGES					
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Picklist Print

March-08-12 8:43:46 AM

Page 4

Work Order ID: 81085

81085

Parent Item: D412-742-043

D412-742-043

Parent Item Name: Replacement Float Skidtube

Start Date: 08/03/2012

Required Date: 22/03/2012

Start Qty: 1.00

Required Qty: 1.00

D4095-045

Manufactured No

110

Each

15.0000

1

1

D4095-045

**

Wearplate Assembly

Handwritten: 12/03/12

Location

Loc Qty

Loc Code

FP001

15

77737

1

79042

5

80702

9

Handwritten: ✓

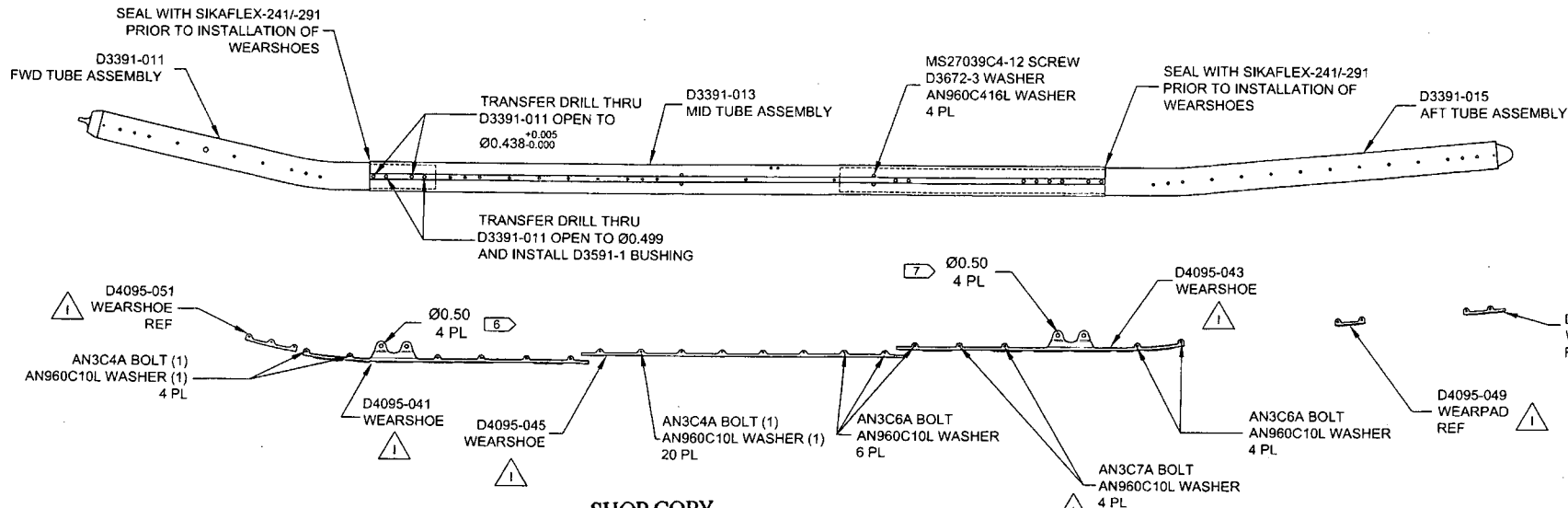
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SHOP COPY
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UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 81085 *MLJ*
12/03/08



RELEASED
2011-11-04
ECN#11-662

D3391-041 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY -041	PART NUMBER	DESCRIPTION
X	D3391-041	FLOAT SKIDTUBE ASSEMBLY
1	D3391-011	FWD TUBE ASSEMBLY
1	D3391-013	MID TUBE ASSEMBLY
1	D3391-015	AFT TUBE ASSEMBLY
2	D3591-1	BUSHING
4	D3672-3	WASHER
1	D4095-041	WEARSHOE
1	D4095-043	WEARSHOE
1	D4095-045	WEARSHOE
1	D4095-047	WEARSHOE
1	D4095-049	WEARSHOE
1	D4095-051	WEARSHOE
24	AN3C4A	BOLT
10	AN3C6A	BOLT
4	AN3C7A	BOLT
38	AN960C10L	WASHER
4	MS27039C4-12	SCREW
4	AN960C416L	WASHER

GENERAL NOTES

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON"
AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES
FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT
WHERE INDICATED.
- 6) FIT D4095-041 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH
APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND
TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-041
- 7) FIT D4095-043 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH
THE APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND
TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-043

I	REMOVE GASKETS AND REPLACE ALL WEARSHOES; PARTS LIST UPDATE, ZN A8-1, ZN A8-2, ZN A6-4, ZN B6-8; LPS-3 COATING REMOVED FROM NOTE 2, ZN A3-1, ZN A3-2, REMOVED INSERT AELS-1032-130, ZN B6-4, B2-4, C7-8, C3-8; REMOVED HOLES, ZN D6-4 ZN D2-4, ZN D7-8, ZN D3-8	XDF	11.10.13
H	DRAWING UPDATED TO CURRENT STANDARDS. SHT 1 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. SHT 2 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. (FOR FURTHER INFO SEE DSI 9364 & NCR 08-074)	AJS	08.08.20
G	REPLACE NAS INSERTS W/ AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS, DWG REORGANIZED FOR CLARITY	DC	07.07.31
F	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011/-021	PH	07.01.18
E	CHANGE TOLERANCE, EASE MANUFACTURE	PH	06.04.25
D	UPDATE TOLERANCE, CHANGE HOLE SIZE	PH	06.01.23
C	LENGTHEN AFT EXTENSION	PH	05.09.27
B	DRAWING UPDATES	PH	05.06.10
A	NEW ISSUE	PH	05.02.07
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	XDF	KENT, WA	
CHECKED		DRAWING NO.	REV. I
MFG. APPR.		D3391	SHEET 1 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	11.10.13	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMBINED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

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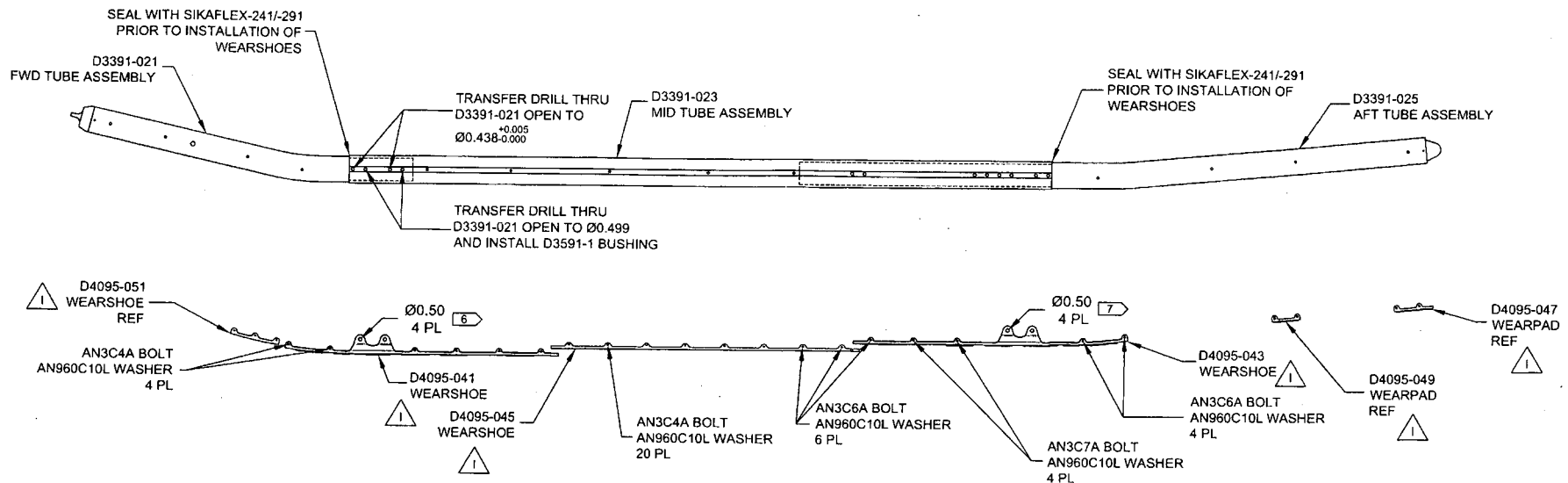
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NOTE: Date & initial all entries

81085



D3391-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY .043	PART NUMBER	DESCRIPTION
X	D3391-043	FLOAT SKIDTUBE ASSEMBLY
1	D3391-021	FWD TUBE ASSEMBLY
1	D3391-023	MID TUBE ASSEMBLY
1	D3391-025	AFT TUBE ASSEMBLY
2	D3591-1	BUSHING
1	D4095-041	WEARSHOE
1	D4095-043	WEARSHOE
1	D4095-045	WEARSHOE
1	D4095-047	WEARSHOE
1	D4095-049	WEARSHOE
1	D4095-051	WEARSHOE
24	AN3C4A	BOLT
10	AN3C6A	BOLT
4	AN3C7A	BOLT
38	AN960C10L	WASHER

GENERAL NOTES

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON"
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- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES
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- 6) FIT D4095-041 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH
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- 7) FIT D4095-043 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH
THE APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND
TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-043

RELEASED
2011-11-04

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	XDF	KENT, WA	
CHECKED		DRAWING NO.	REV. 1
MFG. APPR.		D3391	SHEET 2 OF 8
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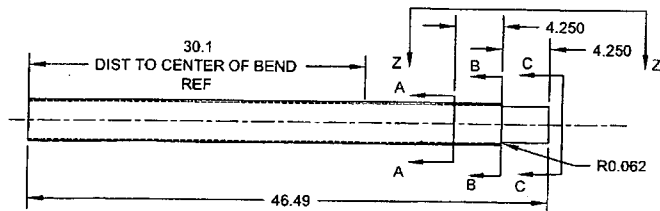
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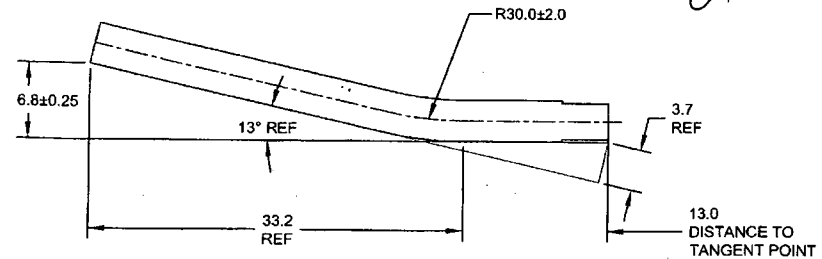
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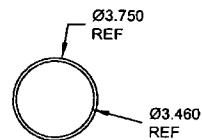
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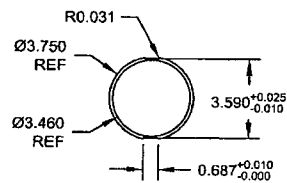
D3391-1 CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



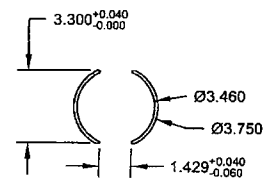
D3391-011/-021 BENDING DETAIL
(MAKE FROM D3391-1)



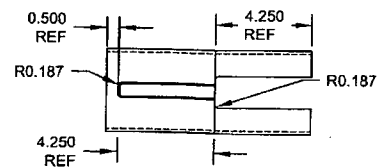
SECTION A-A
SCALE 2X



SECTION B-B
SCALE 2X



SECTION C-C
SCALE 2X



VIEW Z-Z
SCALE 2X

RELEASED
2011-11-04

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	XDF	KENT, WA	
CHECKED		DRAWING NO. D3391	REV. I
MFG. APPR.			SHEET 3 OF 8
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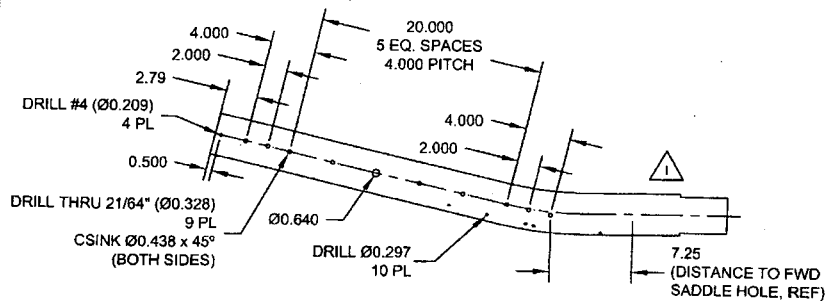
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

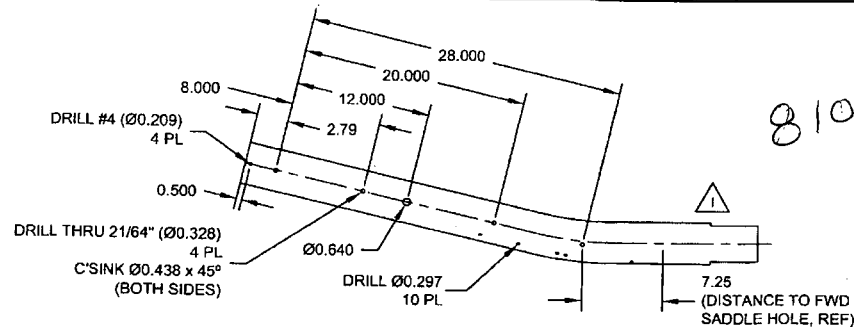
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

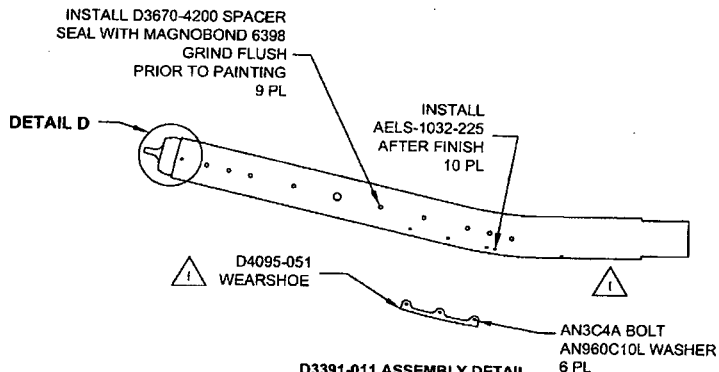
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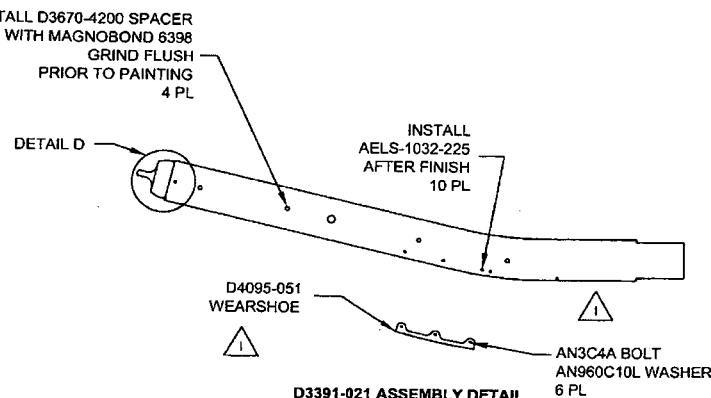
D3391-011 DRILLING DETAIL



D3391-021 DRILLING DETAIL



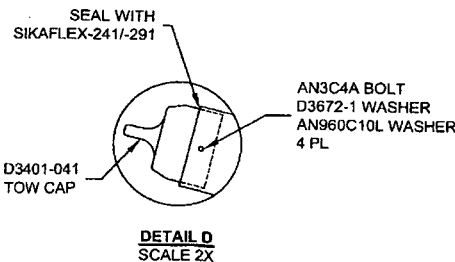
D3391-011 ASSEMBLY DETAIL



D3391-021 ASSEMBLY DETAIL

D3391-011/-021 FWD TUBE ASSEMBLY PARTS LIST

QTY - 011	QTY - 021	PART NUMBER	DESCRIPTION
X	X	D3391-011	FWD TUBE ASSEMBLY
		D3391-021	FWD TUBE ASSEMBLY
1	1	D3401-041	TOW CAP
9	4	D3670-4200	SPACER
4	4	D3672-1	WASHER
1	1	D4095-051	WEARSHOE
1	1	D6013-047	FWD TUBE
10	10	AN3C4A	BOLT
10	10	AN960C10L	WASHER
10	10	AELS-1032-225	INSERT



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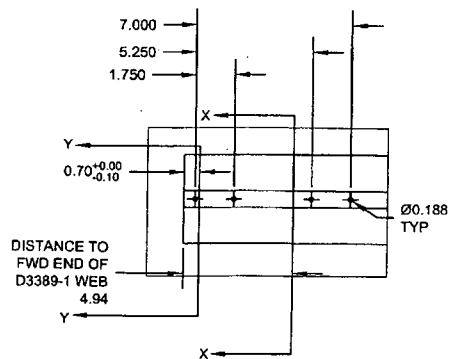
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

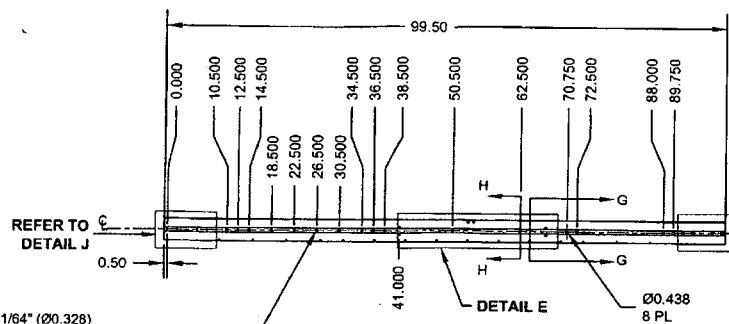
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

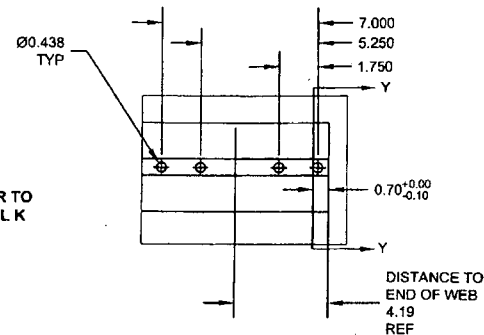


DETAIL J
SCALE 4X

DRILL THRU 21/64" (Ø0.328)
CSINK Ø0.438 X 45° (BOTH SIDES)
12 PL



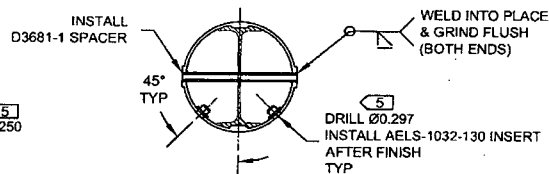
D3391-013 ASSEMBLY DETAIL



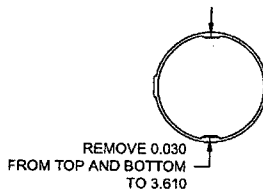
DETAIL K
SCALE 4X



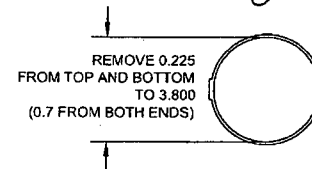
SECTION G-G
SCALE 5X



SECTION H-H
SCALE 5X



SECTION X-X
SCALE 5X



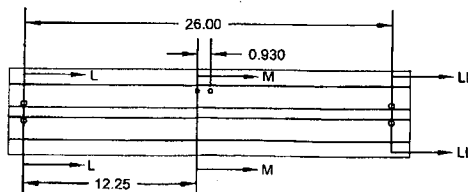
SECTION Y-Y
SCALE 5X

D3391-013 MID TUBE ASSEMBLY PARTS LIST

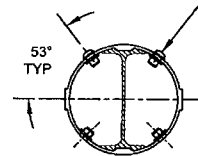
QTY -013	PART NUMBER	DESCRIPTION
X	D3391-013	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
4	D3672-1	WASHER
4	D3672-3	WASHER
12	D3681-1	SPACER
24	AELS-1032-130	INSERT
4	ALS4-428-165	INSERT
4	AN960C10L	WASHER
4	AN960C416L	WASHER
4	MS27039C1-09	SCREW
4	MS27039C4-08	SCREW

D3391-013 MID TUBE ASSEMBLY

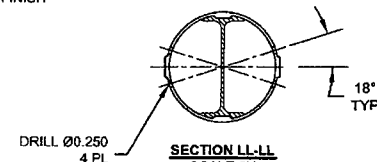
- MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
- WELDING: PER DART QSI 004



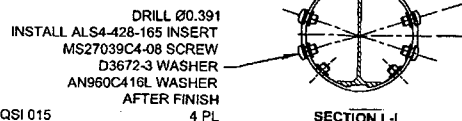
DETAIL E
SCALE NONE



SECTION M-M
SCALE 5X



SECTION LL-LL
SCALE 5X



SECTION L-L
SCALE 5X

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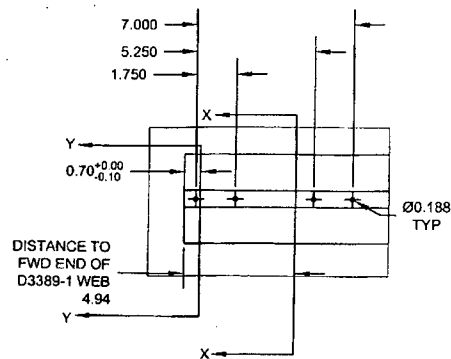
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

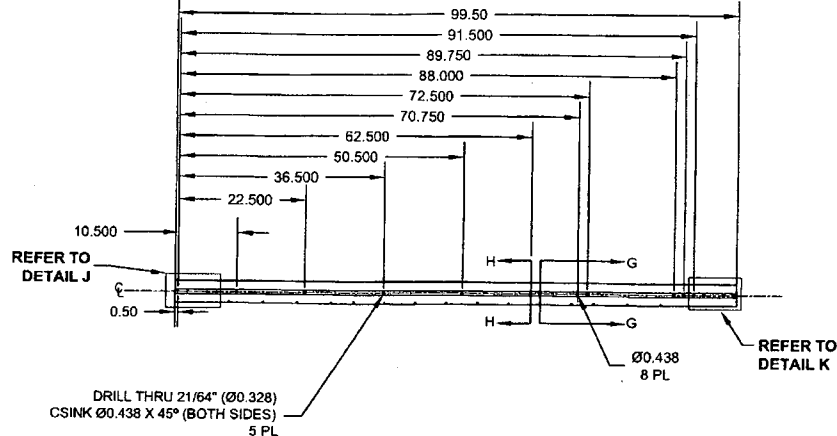
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

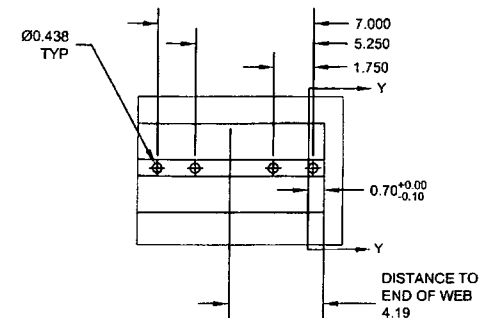
NOTE: Date & initial all entries



DETAIL J
SCALE 4X



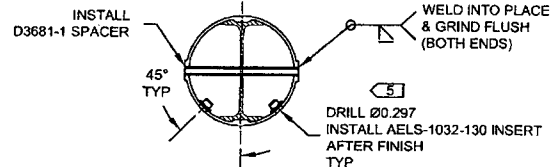
D3391-023 ASSEMBLY DETAIL



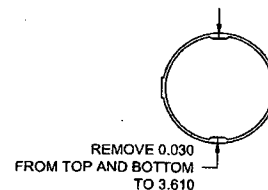
DETAIL K
SCALE 4X



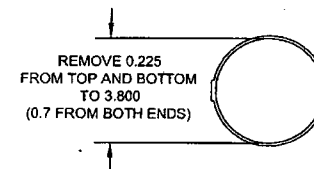
SECTION G-G
SCALE 5X



SECTION H-H
SCALE 5X



SECTION X-X
SCALE 5X



SECTION Y-Y
SCALE 5X

D3391-023 MID TUBE ASSEMBLY PARTS LIST

QTY -	PART NUMBER	DESCRIPTION
023		
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

D3391-023 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/-291 PER QSI 015
- 3) WELDING: PER DART QSI 004

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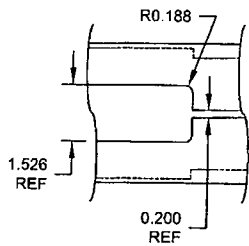
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

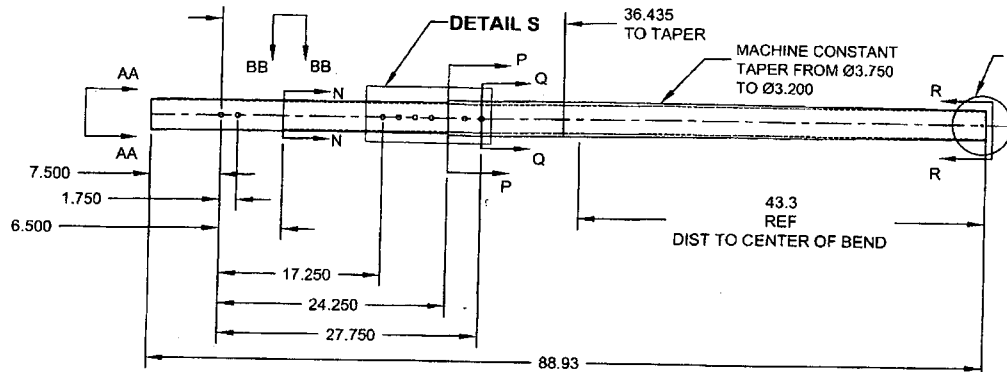
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

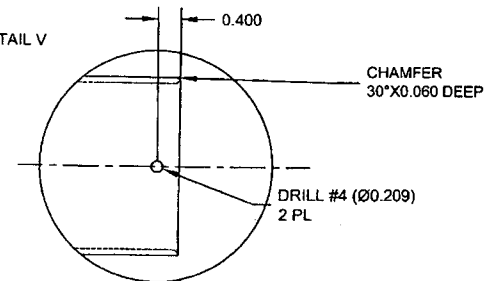
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VIEW BB-BB
SCALE 4X

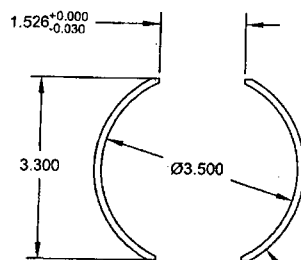


D3391-3 AFT DRILLING AND CUTTING DETAIL
(MAKE FROM D6014-090 SKIDTUBE MATERIAL)

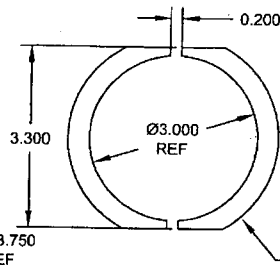


DETAIL V
SCALE 6X

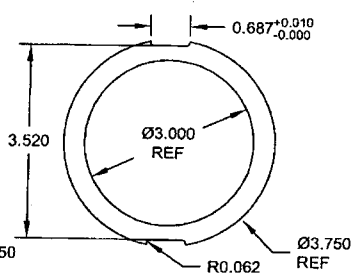
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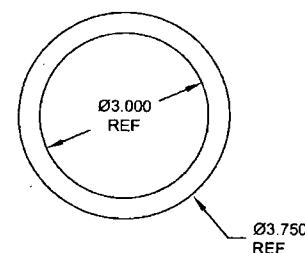
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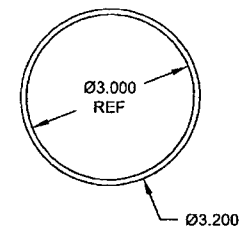
SECTION N-N
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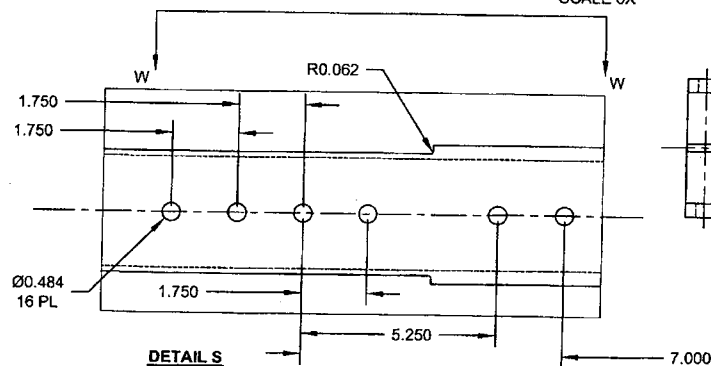
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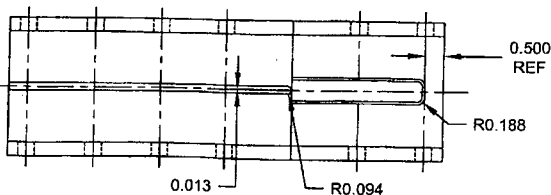
SECTION Q-Q
SCALE 6X



SECTION R-R
SCALE 6X






DETAIL S
SCALE 4X



VIEW W-W
SCALE 4X

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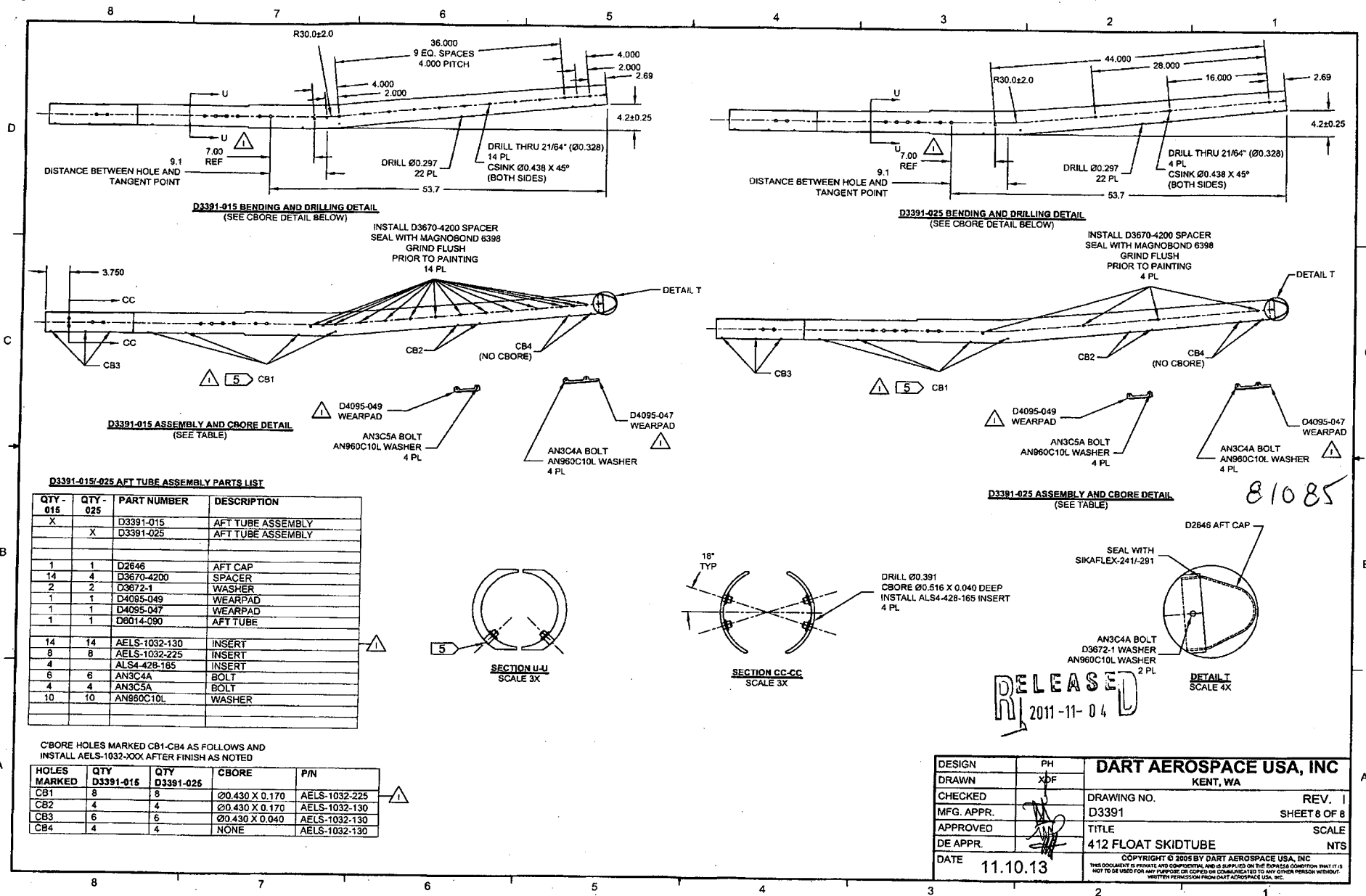
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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